

**Amendments to the Claims:**

The following is a complete list of claims, replacing all prior versions of the claims in the application:

1 **Claim 1 (currently amended):** A polymerizable composition comprising a mixture of an  
2 optically clear dead polymer and polymer, a reactive plasticizer in an amount to render the  
3 composition semi-solid and malleable, ~~and, optionally, an initiator~~, the dead polymer and  
4 reactive plasticizer exhibiting compatibility at temperatures not higher than 100°C, and wherein  
5 the polymerizable composition is semi-solid and malleable and, when polymerized, remains  
6 optically clear and exhibits less than about 5% low shrinkage.

1 **Claim 2 (currently amended):** A polymerizable composition comprising a mixture of i) a  
2 dead polymer derived from monomers that cannot be polymerized in less than 10 minutes in a  
3 mold under UV exposure and exposure, ii) a reactive plasticizer in an amount to render the  
4 composition semi-solid and malleable, the reactive plasticizer having a refractive index that  
5 closely matches the refractive index of the dead polymer and being capable of forming a  
6 crosslinked network when polymerized, ~~and iii) optionally, an initiator~~, the dead polymer and  
7 reactive plasticizer exhibiting compatibility at temperatures not higher than 100°C; wherein the  
8 polymerizable composition is capable of polymerizing in less than 10 minutes in a mold under  
9 UV exposure, and wherein when polymerized the polymerizable composition exhibits an optical  
10 clarity of at least 85% at 2 mm thickness, a refractive index of at least 1.5, a glass transition  
11 temperature of at least 80°C, a modulus of elasticity greater than  $10^9$  dynes/cm<sup>2</sup>, a Shore D  
12 hardness greater than 80, and an Abbe number greater than 25.

1 **Claim 3 (original):** A polymerizable composition according to claim 2 which is impact-  
2 resistant upon polymerization.

1 **Claim 4 (canceled)**

1 **Claim 5 (original):** A polymerizable composition according to claim 2 which exhibits  
2 dimensional stability upon polymerization.

1 **Claim 6 (original):** A polymerizable composition according to claim 2 wherein the reactive  
2 plasticizer is less than 50% by weight of the composition.

1 **Claim 7 (original):** A polymerizable composition according to claim 2 wherein the reactive  
2 plasticizer is less than 25% by weight of the composition.

1 **Claim 8 (original):** A polymerizable composition according to claim 2 wherein the optically  
2 clear dead polymer is selected from the group consisting of polystyrenes, polysulfones,  
3 polyacrylates, polymethacrylates, polycarbonates, polyolefins, polyurethanes, copolymers and  
4 block copolymers.

1 **Claim 9 (currently amended):** A polymerizable composition according to claim 2 wherein  
2 the reactive plasticizer comprises reactive functional groups selected from the group consisting  
3 of acrylate, methacrylate, acrylic anhydride, acrylamide, vinyl ether, vinyl ester, vinyl halide,  
4 vinyl silane, vinyl siloxane, acrylated silicones, methacrylated ~~(meth)acrylated~~ silicones, vinyl  
5 heterocycles, diene, allyl epoxies ~~(with hardeners)~~, allyl epoxies with hardeners, and urethanes.

1 **Claim 10 (new):** A polymerizable composition according to claim 1 further comprising an  
2 initiator.

1 **Claim 11 (new):** A polymerizable composition according to claim 2 further comprising an  
2 initiator.

1 **Claim 12 (new):** A polymerizable composition according to claim 2 wherein the optically  
2 clear dead polymer is selected from the group consisting of methacrylates, polyolefins,  
3 polystyrenes, and polycarbonates.

1   **Claim 13 (new):**       A polymerizable composition according to claim 2 wherein the optically  
2   clear dead polymer is selected from the group consisting of polyolefins.

1   **Claim 14 (new):**       A polymerizable composition according to claim 2 wherein the reactive  
2   plasticizer comprises functional groups selected from the group consisting of acrylate,  
3   methacrylate, vinyl ether, and diene.

1   **Claim 15 (new):**       A polymerizable composition according to claim 2 wherein the reactive  
2   plasticizer comprises functional groups selected from the group consisting of methacrylate.